WORTHINGTON FARM WHITE OAKS
(Worthington Farm *Quercus alba*)
NPS Witness Tree Protection Program
Monocacy National Battlefield
Worthington Farm
Northwest base of Brooks Hill
Frederick vicinity
Frederick County
Maryland

HALS MD-12
MD-12

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN LANDSCAPES SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

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WORTHINGTON FARM WHITE OAKS
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HALS No. MD-12

Location:	Monocacy National Battlefield, Worthington Farm, northwest base of Brooks Hill, Fredrick vicinity, Frederick County, Maryland
Owner/Manager:	U.S. Government, National Park Service
Present Use:	Historic landscape features
Significance:	The Worthington Farm White Oaks (*Quercus alba)* are significant due to their likely association with the nineteenth-century African American community of their namesake farm.
Author & Discipline:	Jonathan Pliska, Landscape Architectural Historian, 2007
Project Information:	The Witness Tree Protection Program was a pilot project undertaken by the Historic American Landscapes Survey and the National Capital Region of the National Park Service. The principals involved were Richard O'Connor, Chief, Heritage Documentation Programs; Paul D. Dolinsky, Chief, Historic American Landscapes Survey; Darwina Neal, Chief, Cultural Resources, National Capital Region; Jonathan Pliska, Historian, Historic American Landscapes Survey; Jet Lowe and James Rosenthal, Photographers, Heritage Documentation Programs.

PART I. HISTORICAL INFORMATION[1]

This pair of white oak trees is planted on the south side of a historic fenceline at the northwest base of Brooks Hill, itself spanning the southwestern boundary of Monocacy National Battlefield. The trees stand on either side of what National Park Service officials believe was once a path leading to a small, two-room dwelling house, of which only the stone foundation remains. Given this positioning, the trees may have been intentionally planted here, although such a supposition remains speculative as no information is available regarding the foundation's time period, occupants, or function. The site, however, is believed to be associated with the nineteenth-century Worthington Farm,

[1] Adapted from Perry Wheelock and Martha Temkin, *Monocacy National Battlefield: Cultural Landscapes Inventory* (Washington, D.C.: U.S. Dept. of the Interior, National Park Service, National Capital Region, Cultural Landscapes Program, 2004), 47-49.

located nearby to the north. The Worthington Farm is named after agricultural entrepreneur John T. Worthington, who purchased the property in 1862. The farm however, was already very productive at the time of Worthington's purchase, with only twenty-five of its approximately 300 acres unimproved, and remained successful throughout the nineteenth century, utilizing slaves and, after the Civil War, black tenant farmers. Writing in 1932, Worthington's son, Glenn H. Worthington, mentioned a small, one-and-a-half story building, termed "the quarter" located near the south end of the farm's main house (constructed ca. 1851). This building presumably housed the "few slaves" owned by the Worthington family. While the unidentified foundation is both small and situated south of the main house, it seems too distant to be the building referenced by Glenn Worthington. However, the original owner of the farm, Griffin Taylor, was a wealthy landowner and may have constructed this dwelling earlier in the century for the use of his slaves. Additionally, the unidentified foundation may constitute the remains of a small house inhabited by post-bellum African American sharecroppers. United States Census records for 1870 and 1880 reveal that African Americans were indeed employed on the farm during these years, and small tenant houses, akin to that suggested by the foundation remnants, were common to farms in the area. In either case, the foundation and its pair of white oaks most likely bear an association with the history of Worthington Farm's African American community.

PART II. BIOLOGICAL INFORMATION

Commonly known as white oak, *Quercus alba* is native to North America with a home range stretching from Maine to Florida, and west to Minnesota and Texas.[2] However, its growing zone has extended to cover the contiguous forty-eight states.[3] It is one of approximately 450 diverse species classified under the genus *Quercus* within the oak family Fagaceae.[4] Since many different species share similar features, there is no single characteristic of the white oak that makes it instantly identifiable. However, due to its proliferation across the United States, it comprises the archetypical manifestation of an oak tree. As such, members of the general public easily recognize its leaves, bark, acorns, and overall appearance. The deciduous leaves are arranged on alternate sides of branches and measure approximately 4" to 8 ½" long x 2" to 4" wide. Five to nine oblong lobes branch out from both sides of the central axis, each containing a vein.[5] Leaves are dark green or dark-blue green on their fronts, but pale underneath. In the fall they turn a showy red, sometimes with a purple hew. Bark is an ashy gray and variable in appearance but often ridged, scaled, or otherwise arranged in vertical blocks. Trees exhibit a pyramidal habit when young, but branches spread out with age, forming a more rounded crown.

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[2] Michael A. Dirr, *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*, 5th edition (Champaign, Ill.: Stipes Publishing L.L.C., 1998), 815.
[3] Edward F. Gilman and Dennis G. Watson, Quercus alba*: White Oak* (Gainsville, Fla.: University of Florida, Institute of Food and Agricultural Sciences, November 1993), http://edis.ifas.ufl.edu/ST541 (accessed 12 June 2006).
[4] Liberty Hyde Bailey and Ethyl Hyde Bailey, "*Quercus*," in *Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada*, revised and expanded by the staff of the Liberty Hyde Bailey Hortorium, Cornell University (New York: Macmillan Publishing Co., Inc., 1976), 933.
[5] This branching pattern is known as pinnate venation.

The overall form is often striking, especially during the winter when all branches are clearly visible. Acorns are oblong-ovoid in shape, ¾" to 1" long, deep brown in color, enclosed for one-fourth to one-third its length by a light brown, bumpy, bowl-like cap.[6] Trees typically produce acorns between fifty and 200 years of age, but some reach maturity quicker and begin production by age twenty. Although less noticeable than these other features, flowers begin appearing on mature trees between late March and late May. They take the form of catkins, compact and often droopy forms quite different from the open petal types produced by many other species. White oak is monoecious, meaning both male and female catkins appear on each tree. Male (staminate) catkins appear first. They are yellow and measure 2" to 3" in length. The reddish, female (pistillate) catkins appear five to ten days later on short stalks.[7]

In general, white oaks range from 60' to 100' tall, with circumferences of approximately 120" to 160", and crown spreads of 50' to 90'.[8] Although they have not been measured, the Worthington Farm White Oaks are large trees, likely near the typical maximum size for the species. *Quercus alba* is also an extremely slow-growing and long-lived species, averaging 1' of new growth per year or less, and with a life expectancy of greater than 165 years.[9] Assuming the Worthington Farm White Oaks due indeed date to sometime in the mid-to-late nineteenth century, they may have already reached this typical life expectancy or will do so in the next few decades.

Quercus alba is an extremely vigorous species that exhibits no serious susceptibility to pests or diseases, and is suited to a variety of environmental conditions. The trees grow best in mildly acidic soils and accept clay, sand, or loamy earth that is left occasionally wet or routinely well-drained. They are moderately drought tolerant, but highly resistant to the damaging effects brought on by elevated ozone levels or the presence of aerosol salts, frequently used to melt ice and aid drivers in the winter months. These factors make them desirable urban trees, and they grow well in lawns, parking lot islands, and highway medians. However, careful planning should be exercised due to their large size, and roots will lift sidewalks and curbing if planted in areas less than 8' wide.[10] The Worthington Farm White Oaks were planted in favorable conditions and appear to be in fair to good health. They were pruned in the fall of 2005.[11]

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[6] Dirr, 814.
[7] Robert Rodgers, "Eastern Cottonwood," in *Silvics of North America: 2. Hardwoodss. Agricultural Handbook 654*, online ed., Russell M. Burns and Barbara H. Honkala, tech. coords. (Washington, D.C.: U.S. Dept. of Agriculture, U.S. Forest Service, 1990),1185, http://www.na.fs.fed.us/spfo/pubs/silvics_manual/volume_2/silvics_v2.pdf (accessed 13 June 2006).
[8] Gilman and Watson; Lincoln Moore, "Plant Fact Sheet: White Oak, *Quercus, phellos*," in *PLANTS Database* (Washington, D.C.: U.S. Department of Agriculture, U.S. Forest Service, National Plant Data Center, 5 February 2002), http://plants.nrcs.usda.gov/factsheet/pdf/fs_qual.pdf (accessed 23 June 2006).
[9] Dirr 814; Jeffery L. Reimer and Walter Mark. "*Quercus alba*," in *SelecTree: A Tree Selection Guide* (San Luis Obispo, Calif.:Urban Forest Ecosystems Institute, 2004), California Polytechnic State University, http://selectree.calpoly.edu (accessed 21 June 2006).
[10] Gilman and Watson.
[11] Joy Beasley, Cultural Resources Program Director, Monocacy National Battlefield, to Jonathan Pliska, electronic mail, 19 December 2007.